

ARMSTRONG



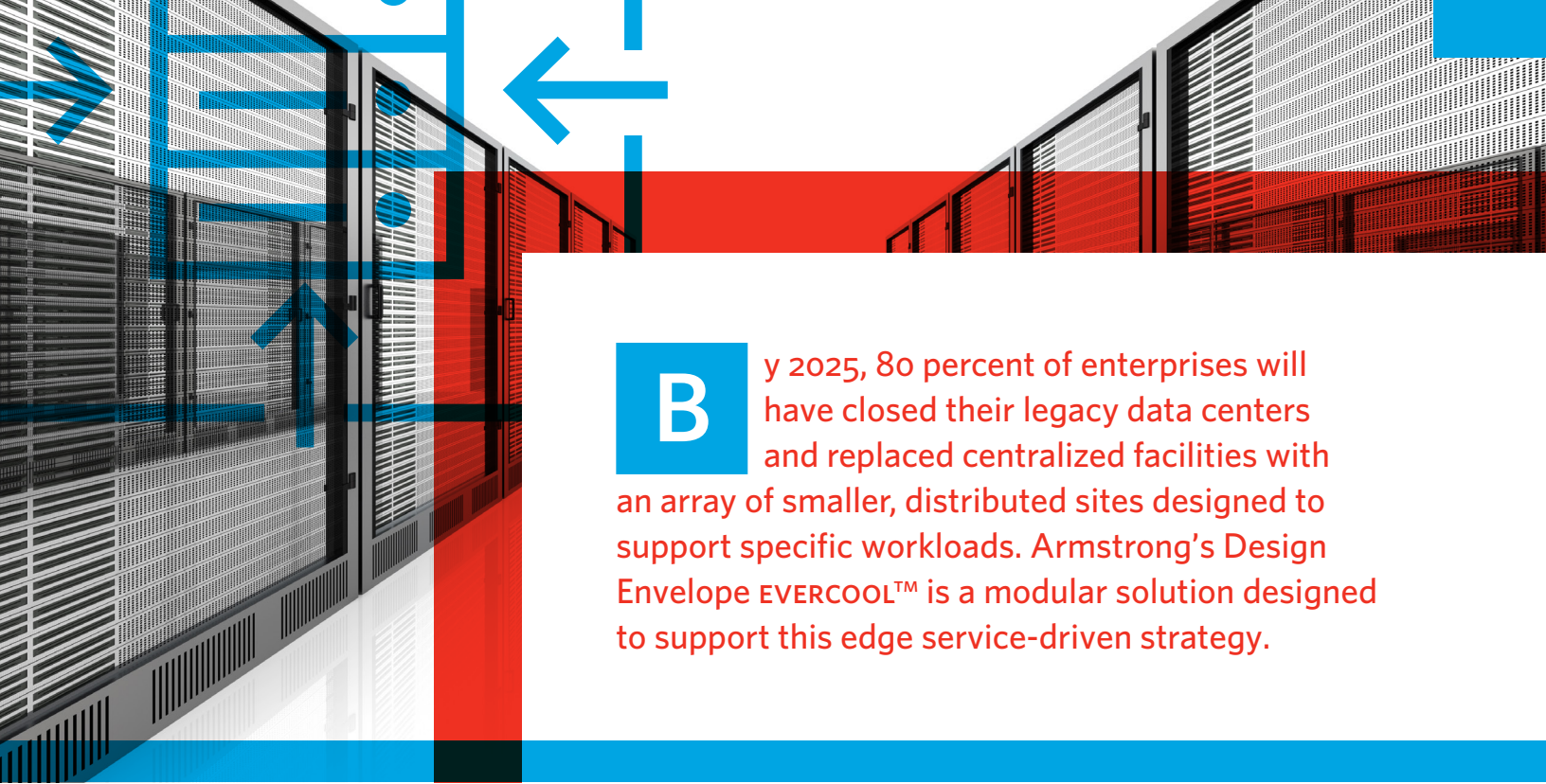
DESIGN ENVELOPE

EVERCOOL™

Data Center Cooling Automation Solutions

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By 2025, 80 percent of enterprises will have closed their legacy data centers and replaced centralized facilities with an array of smaller, distributed sites designed to support specific workloads. Armstrong's Design Envelope EVERCOOL™ is a modular solution designed to support this edge service-driven strategy.

INTEGRATED AUTOMATION & OPTIMIZATION SOLUTION

FOR DATA CENTERS

As the data center market evolves and the pace of construction continues, designers are pushed to meet demands for short timelines, speed to market and design resilience. At the same time, they are increasingly responsible for efficiency improvements.

Armstrong's EVERCOOL is a robust automation solution for deployment on all data center cooling systems, including Tier 3. Pre-engineered to be agile, responsive, and flexible to project specific needs, it delivers:

Saves design time by 25%

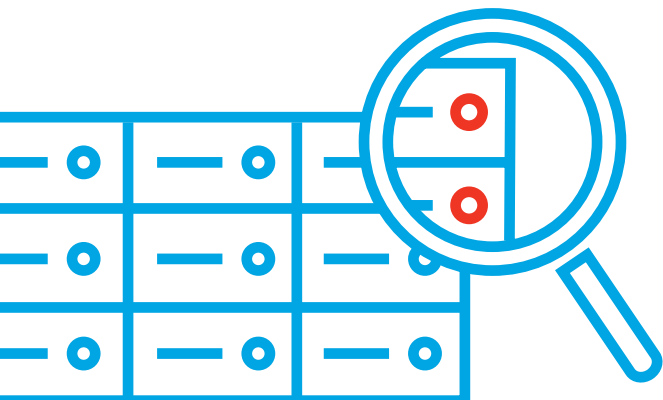
Reduces site work by 30%

Saves up to 40% in data center cooling costs

Robust fault-tolerant architecture eliminates risks

Active Performance Management reduces equipment life cycle cost by up to 25%

EVERCOOL provides an integrated solution for both air-cooled and water-cooled chiller plants systems, supporting chillers, chilled water and condenser pumps and cooling towers.



RELIABLE PERFORMANCE

Your plant's cooling system is a composition of components, sensors and automated devices that contribute to ensure reliable performance.

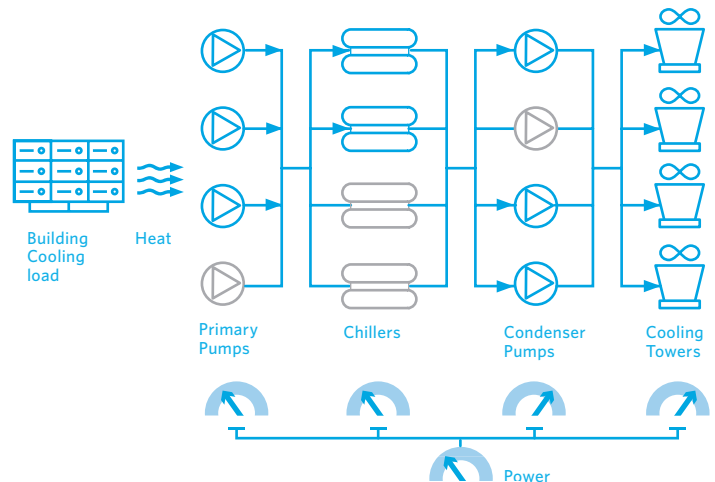
EVERCOOL is a solution that manages the interaction between components across the entire HVAC system. Its embedded intelligence and adaptive learning capabilities responds to data hall cooling requirements with:

Feedforward control

Demand-based sequences

Digitalization for plant diagnostics

Capacity reporting



EVERCOOL is capable of operating non-equal numbers of units for optimal efficiency of the entire plant. Above are three pumps that are serving two chillers and four towers.

BETTER TOGETHER

EVERCOOL reduces overall energy consumption by coordinating all the system components to work more efficiently together.



SITE ENERGY PERFORMANCE

EVERCOOL provides superior efficiency to help improve your data center cooling costs by as much as 40%. Water and energy usage are reduced with innovative control algorithms that optimize operation of the entire plant.

Our experience in developing all variable, demand-based cooling technology makes Armstrong your best choice to maintain the cooling efficiency in your data center operation over time.

PRE-ENGINEERED

FOR RAPID PROJECT DEPLOYMENT



The world of cooling plant systems has traditionally relied on one of two design extremes that force users to sacrifice either time-to-market or functionality:

- ① Expensive systems, individually designed and coded for each installation, take days or even weeks to deploy and commission.
- ② Off-the-shelf systems, using a 'one-size-fits-all' approach can be more quickly commissioned, but often lack the feature set required by the site.

Custom developed, but slow to deploy and difficult to maintain.

Faster to deploy, but light on features.



The Armstrong EVERCOOL solution combines the best of both approaches. Through a proven sequence of operations, EVERCOOL reduces site commissioning time by up to 30%. While the platform is pre-engineered and thoroughly tested for quick deployment, it can also be easily customized to meet the requirements of each unique application.

THE ARMSTRONG FORMULA

RAPID PROJECT DEPLOYMENT

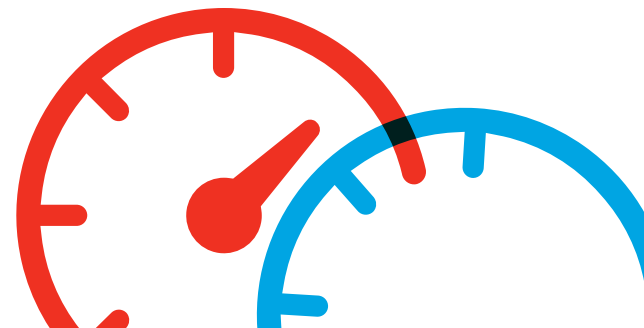


85% STANDARDIZED FEATURES
.....
15% UPGRADEABLE OPTIONS

Allows fast installation and tailored solutions to meet the specific needs of each mission critical application.

DATA CENTER EXPERIENCE AND EXPERTISE

With 20 years of experience serving the data center industry and having installations on four continents, Armstrong has the expertise you need to make your projects successful. We understand the competitive environment and the exacting demands of carefully monitored performance measurements. No other provider in data center cooling can offer the capabilities and system-wide perspective that we bring to mission-critical applications.



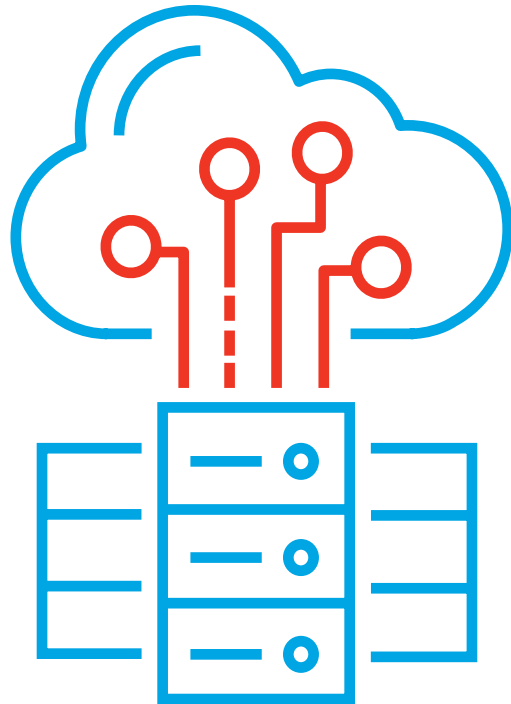
CONTINUOUS UPTIME THROUGH INNOVATIVE DESIGN

Data center traffic is expected to reach 19.5 zettabytes (ZB) per year by 2021, up from 6.0 ZB per year in 2016, according to Cisco. This increasing volume of data will make it even more critical for designers to find solutions that are reliable and energy efficient.

Whether your data center is Tier 1, 2, 3 or 4, EVERCOOL will meet your control requirements, shorten project timelines and reduce risks. EVERCOOL offers an innovative design with internal redundancy and distributed design features. It also includes a hot-standby controller to ensure redundancy and provide seamless transfer (in less than 300 milliseconds) between controllers in the event of failure.

In addition, EVERCOOL minimizes the impact of temperature fluctuation associated with transient equipment failures by operating equipment in parallel.

No other integrated mission critical cooling automation solution offers the same combination of cost-effective redundancy and performance efficiency.



Armstrong solutions offer dependability through robust fault-tolerant architecture.



Invest up-front in adaptable, modular, high-efficiency systems for sustained competitive advantage and better long-term financial performance.

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